

## ABSTRACT OF THE INVENTION

[0031] The present invention provides methods for deflecting the routing data packets in an IP network to avoid overloaded links and to alleviate link congestion. One method in accordance with the present invention is, when the next link on the shortest route path is congested, to deflect a data packet to an adjacent node with a decreasing cost to the destination that is not the next hop on the shortest route path to the destination. A further method in accordance with the present invention deflects a data packet to an intra-PoP node with a small increase in cost to the destination to avoid a congested link. These and other methods in accordance with the present invention may be used alone or in combination as a method for deflection routing data packets to alleviate and avoid link congestion in an IP network.